

## Document Information

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001	2019-Mar-22	Chris Marsden	Initial document
002	2019-Mar-26	David Montgomery	Add details re: lockdown LED sequence
003	2019-Oct-02	David Montgomery	Fix Typo's

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## dbDualLock (S)



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## dbDualLock (S) Installation

### Determining which Lock Pawl to use

As all cabinets vary, we offer a wide range to pawls to suit the particular dimensions of your cabinet.

There are 2 simple measurements that need to be taken to determine which pawl you will need.

Please obtain the measurements as show in Figure 1 and Figure 2 below and contact our support team at [support@digitus-biometrics.com](mailto:support@digitus-biometrics.com)

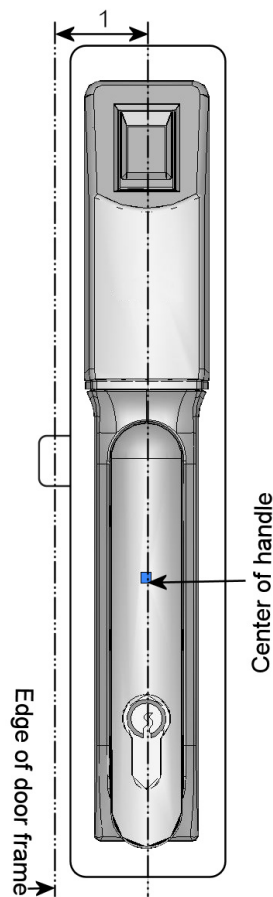


Figure 1 – Measurement 1  
Edge of Door Frame to Center of Handle

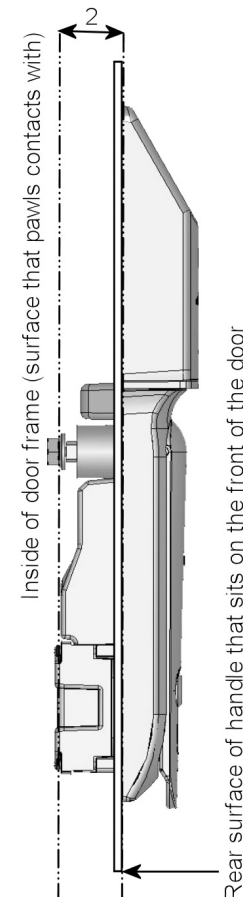


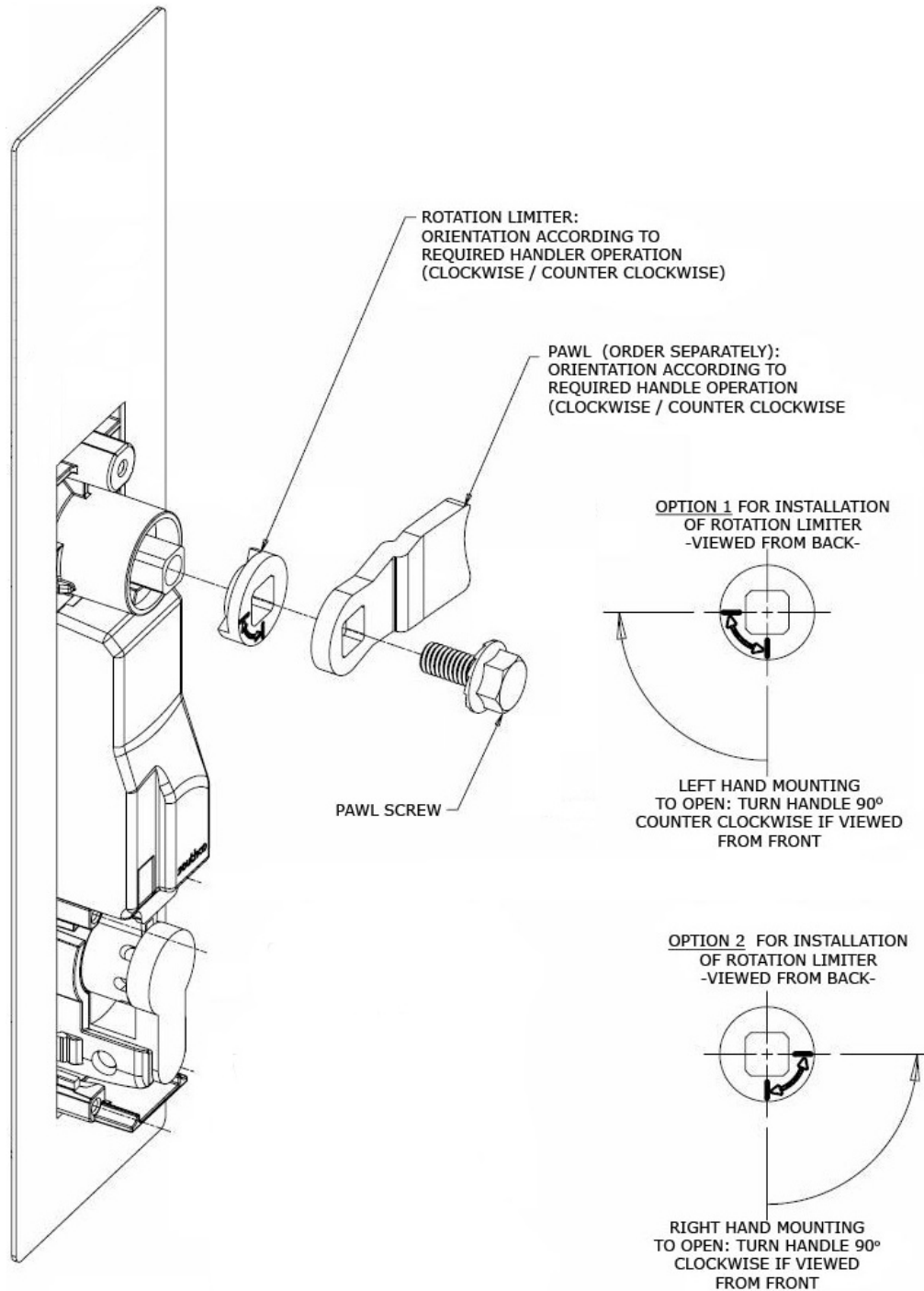
Figure 2 – Measurement 2  
Rear surface of handle to Inside of Door Frame

In most situations the pawl from the existing mechanical handle can be re-used with the new lock.

### Mounting the dbDualLock (S)

- If you are installing the dbDualLock (S) into a cabinet that already has a handle / lock installed, remove it.
- Secure the dbMultiCardLock (S) to the door using the top and bottom mounting brackets, being careful not to over tighten the screws as this could cause the lock mechanism to jam.

## Installing the Rotation Limiter



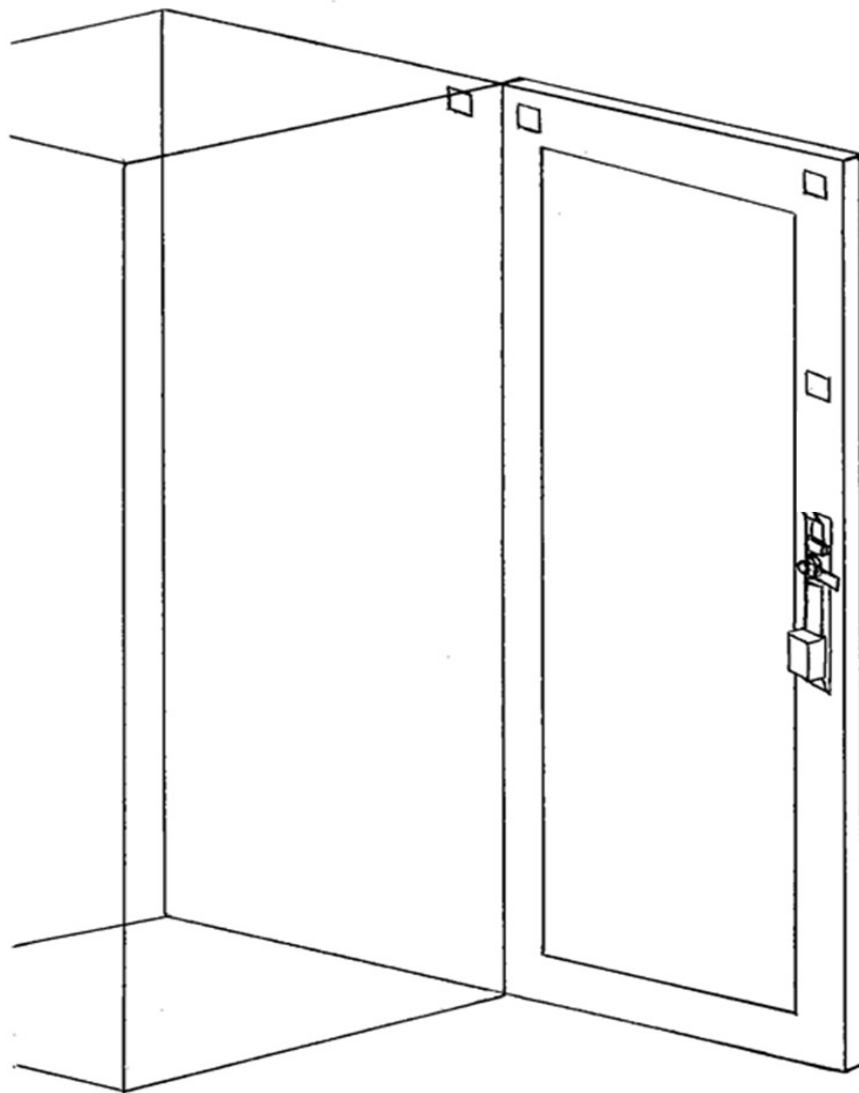
**Figure 2 – Rotation Limiter**

### Positioning the Tie-Down Pads

The second step is to mount the tie-down pads to the cabinet and the cabinet door as illustrated below.

The tie-down pads are used to secure the supplied cable that connects the lock directly to the Remote Node / db Sentry or Access Control panel.

Ensure that the door surface is clean and free from any debris. Use rubbing alcohol to clean the surface is highly recommended and allow sufficient time for the cleaned areas to dry before mounting the tie-down pads.



**Figure 3 – Positioning the tie-down pads**

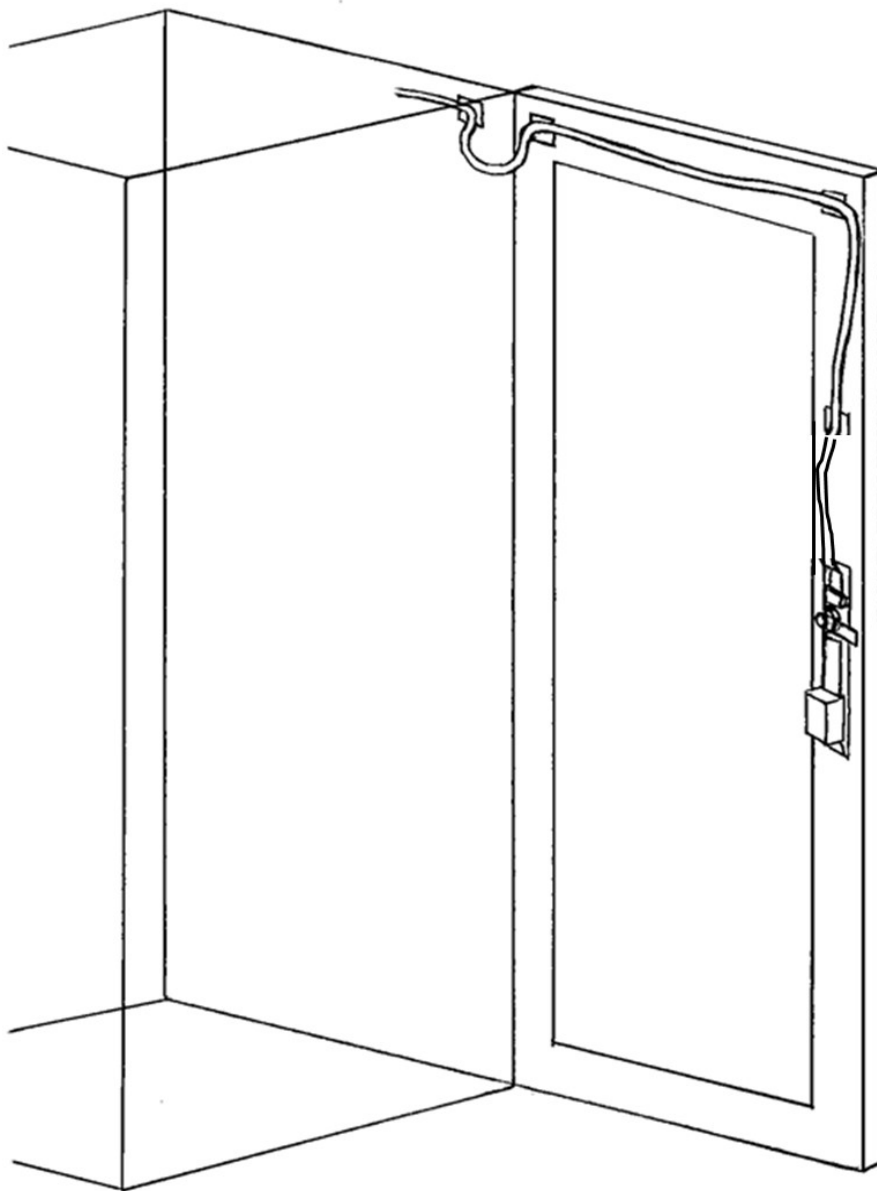
Remove the protective cover from each tie-down pad and situate as shown in Figure 3.

### Routing the Lock Cable

Route the cable between the lock and the Remote Node / db Sentry Controller or ACM Panel.

Route the lock cable to the door hinge as illustrated below and secure the cable to the tie-down pads using the supplied cable-ties. Connect the supplied device cable to the RJ-45 coupler and route it to:

- the Remote Node or Sentry (if you are using Digitus a controller)
- 3<sup>rd</sup> Party Access Panel (if you are connecting to a third-party access control panel, connect a network cable to RJ-45 coupler and run back to panel).



**Figure 4 – Routing the cable**

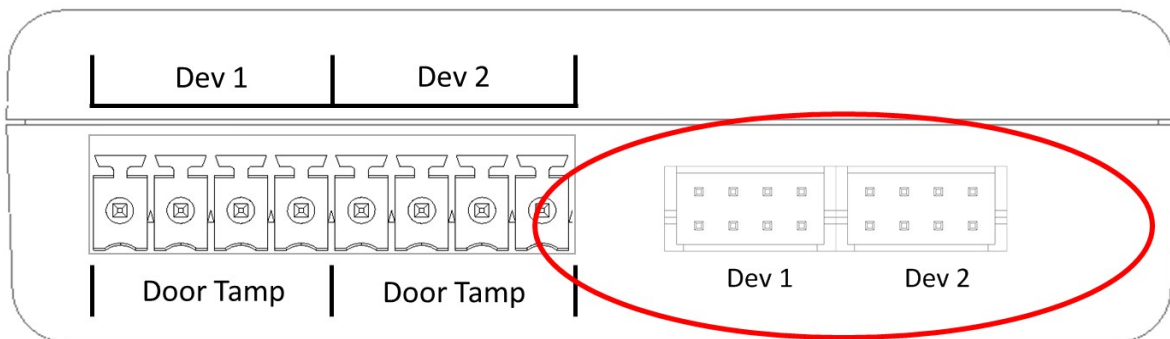


### Connecting to dbRemote Node / dbSentry

Connect the cable to the dbRemote Node / dbSentry Controller.

Handles / locks are connected to the dbRemote Node or dbSentry socket circled in the diagram below.

Each dbRemote Node / dbSentry Controller has two device inputs, Dev 1 and Dev 2.



**Figure 5 - Side View of dbRemote Node**



**Figure 6 - Side View of dbSentry**

For clarity and consistency, it is recommended that for a cabinet with 2 doors, the front door is connected to Dev 1 and the back door is connected to Dev 2.

## Connecting to 3<sup>rd</sup> Party Access Panels

Connect the lock to 3<sup>rd</sup>-party Access Panel

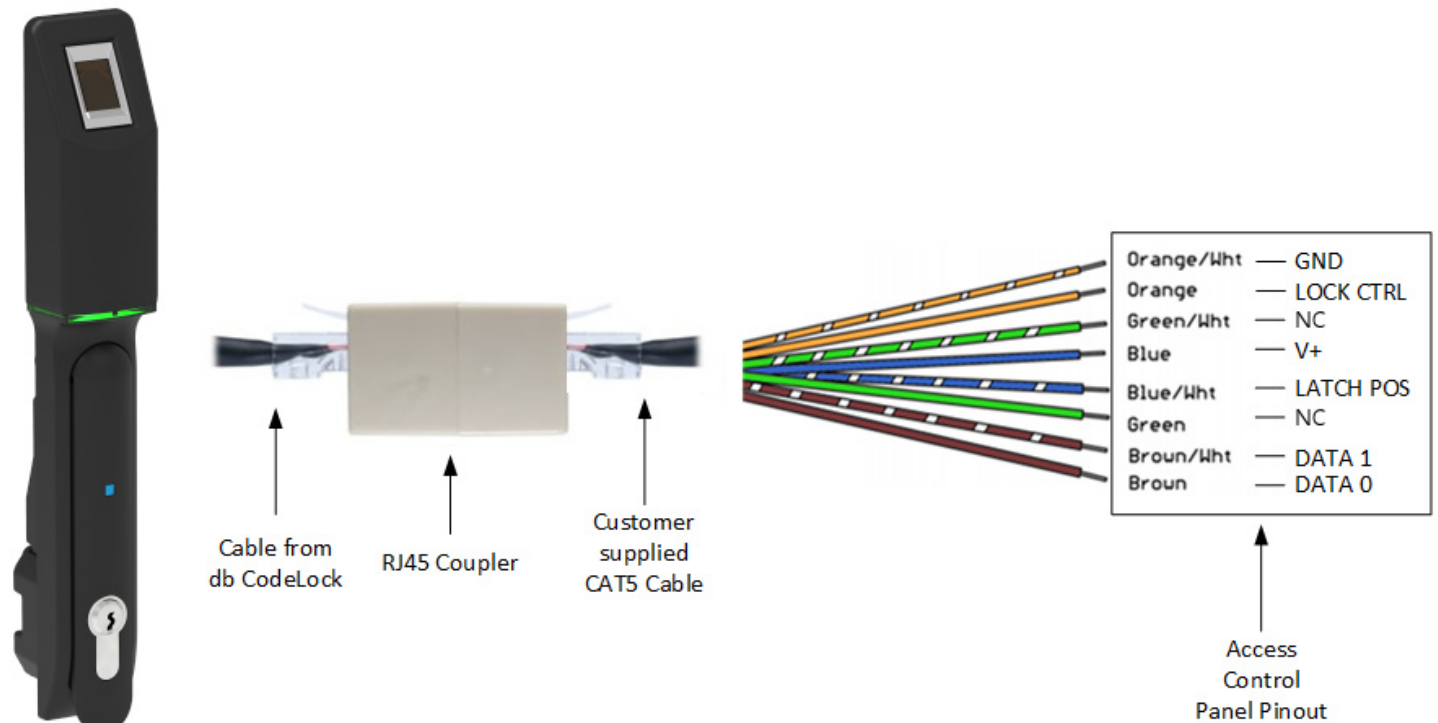


Figure 7

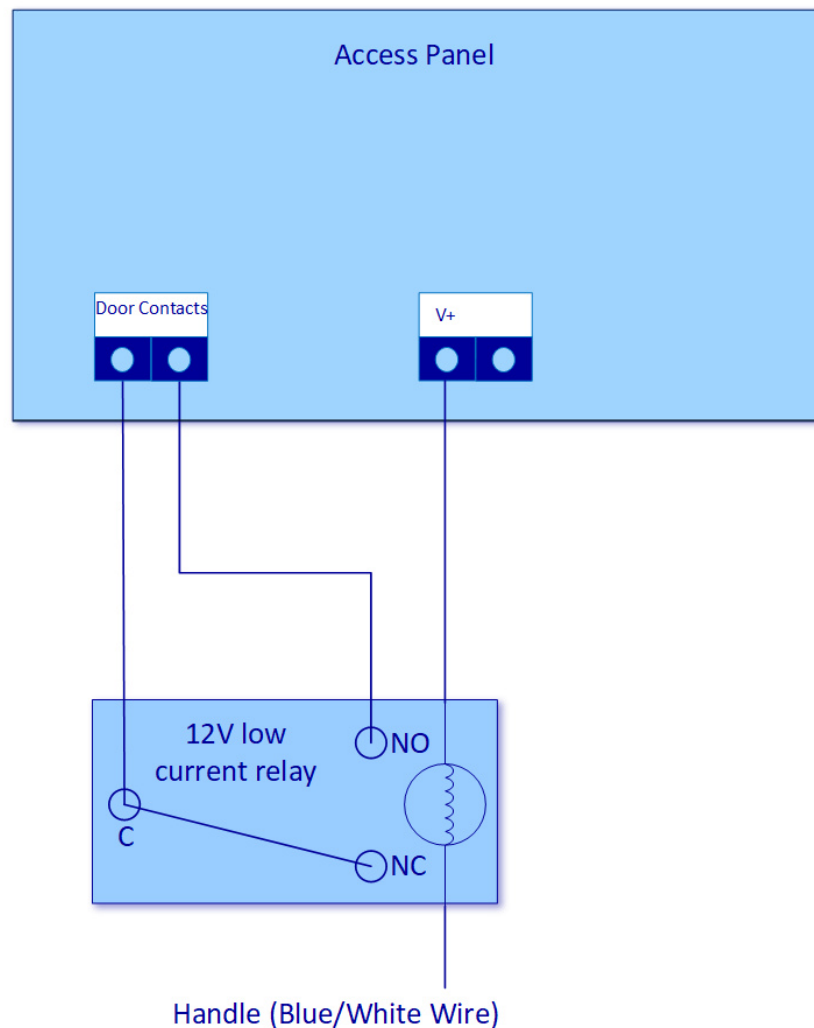
Color	Control	Notes
Orange / White	GND	Ground
Orange	LOCK CTRL	Requires a 12V (24V if a 24V version of the dbDualLock was purchased) control line to unlock the handle
Green / White	RED LED	NC
Blue	V+	Requires a 12VDC Supply
Blue / White	LATCH POS	(used to indicate if the lock is open or closed) – Will be pulled to Ground (GND) if the handle is closed. Will be open circuit if the handle is open. <i>See diagram below</i>
Green	GREEN LED	NC
Brown / White	DATA1	Wiegand Data 1
Brown	DATA0	Wiegand Data 0

### Connecting Latch Position to 3<sup>rd</sup> Party Panel

The dbDualLock (S) provides the capability to monitor whether the handle is in the open or closed position. This is a single signal from the handle, shown as "LATCH POS" in the table above.

If the 3rd-party Access Panel requires a 2-wire input to monitor the handle position, an external 12v low current relay is required. The diagram below shows how to connect the "LATCH POS" signal to a 3rd-party Access Panel with a relay.

Approved relays can be purchased by contacting your Digitus vendor or by emailing [sales@digitus-biometrics.com](mailto:sales@digitus-biometrics.com)



**Figure 8 – Connecting Latch Position to a 3<sup>rd</sup> Party Panel**

## Power Up

- Upon power-up, the dbDualLock (S) performs a **RED** / **AMBER** / **GREEN** traffic light sequence on the handle LED. The handle LED will remain solid **GREEN** for up to 10 seconds while the handle tries to establish communication with a dbSentry or dbRemote Node (which typically takes less than 2 seconds). If the Reader LED remains **GREEN** for the full 10 seconds, the dbDualLock (S) has not been able to establish communication with a dbSentry or dbRemote Node and therefore assumes that it is connected to a 3<sup>rd</sup> party Access Panel.
- After the power-up sequence, a flashing **RED** LED on the handle signifies that communication with the fingerprint sensor has been lost. The handle will remain inoperative until the issue is resolved.

## Updating Firmware

### Connected to a dbSentry or dbRemote Node

- Initiate the firmware upload via DAS-SQL
- The handle LED will flash **AMBER** while the handle firmware is being received.
- The handle LED will stop flashing and turn solid **AMBER** to indicate that programming is taking place (which typically takes around 20 seconds). If power is interrupted in this state, the lock could be irreparably damaged.
- Once the programming is complete, the Reader LED will turn **GREEN** before rebooting. Following which the dbDualLock (S) performs a **RED** / **AMBER** / **GREEN** traffic light sequence on the Reader LED indicating the handle is booting up.
- If the Reader LED turns **RED** for 3 seconds or **GOES OFF COMPLETELY**, there was a problem with the firmware being received.

### Connected to a 3<sup>rd</sup>-party Access Panel

- If a Digitus Support Technician advises that your handle requires a firmware update, Digitus will ship a loan programmer which, once connected directly to your handle, will update the firmware.

## Configuration Cards

### Handle Configuration Card

There may be instances where the operational aspects of the handle need to be changed. This is done using a configuration card.

A member of the Digitus Support Team will advise you if a configuration card is required.

- The configuration card is presented to the handle.
- The Reader LED will flash **GREEN** 3 times to indicate that the configuration data was saved to non-volatile memory.

### RFID Configuration Card

There may be instances where changes need to be made to the configuration of the RFID reader. This is done using a configuration card.

A member of the Digitus Support Team will advise you if a configuration card is required.

- The dbDualLock (S) needs to be powered off.
- At the same time as the dbDualLock (S) is powered up, present the configuration card to the handle – holding to card to the handle for 10 seconds. There are no visual or audible confirmations that programming has taken place.

## Reader LED

### Connected to dbSentry or dbRemote Node

- If a card was read successfully, the fingerprint templates are read from the card and stored in RAM on the dbDualLock (S). The handle LED will flash **AMBER** for up to 5 seconds indicating that the user should place a valid finger on the fingerprint sensor.
- If a finger was placed on the sensor within the 5 second time-out period, the dbDualLock (S) will perform a match between the finger placed on the fingerprint sensor and the templates read from the card.
- If a finger match is obtained, the user's information is sent to the controller and the handle LED will turn solid **AMBER** to show that user verification is in progress.
  - If access is granted the handle LED will turn solid **GREEN** and the handle will unlock for the programmed "entry delay".
  - If access is denied the handle LED will turn solid **RED** for 3 seconds.
- If a finger is not placed on the sensor during this time, the handle LED will turn solid **RED** for 3 seconds and access is denied.
- If the finger placed on the fingerprint sensor didn't match any of the templates read from the card, the handle LED will turn solid **RED** for 3 seconds and access is denied.
- If an unknown/invalid card is presented or authentication to the card failed the handle LED will turn solid **RED** for 3 seconds and access is denied.
- If the handle is in "Lockdown" mode, the handle LED will alternate between **RED** and **AMBER** until "Lockdown" is cancelled.

### Connected to an Access Control Panel

- If a valid card was read successfully, the fingerprint templates are read from the card and stored in RAM on the dbDualLock (S). The handle LED will flash **AMBER** for up to 5 seconds indicating that the user should place a valid finger on the fingerprint sensor.
- If a finger was placed on the sensor within the 5 second time-out period, the dbDualLock (S) will perform a match between the finger placed on the fingerprint sensor and the templates read from the card.
- If a finger match is obtained, the user's information is sent to the controller and the handle LED will turn solid **AMBER** to show that user verification is in progress.
  - If access is granted the handle LED will turn solid **GREEN** and the handle will unlock for a period of time determined by the access control panel.
  - If access is denied the handle LED will turn solid **RED** for 3 seconds.
- If a finger is not placed on the sensor during this time, the handle LED will turn solid **RED** for 3 seconds and access is denied.
- If the finger placed on the fingerprint sensor didn't match any of the templates read from the card, the handle LED will turn solid **RED** for 3 seconds and access is denied.
- If an unknown/invalid card is presented or authentication to the card failed the handle LED will turn solid **RED** for 3 seconds and access is denied.
- If the handle is in "Lockdown" mode, the handle LED will alternate between **RED** and **AMBER** until "Lockdown" is cancelled.

## Status LED

The dbDualLock (S) is equipped with a tri-color **RED** / **MAGENTA** / **BLUE** status LED located on the front of the handle.

The LED states are as follows:

- When the dbDualLock (S) is locked and secure the Status LED will turn solid **BLUE**.
- When the dbDualLock (S) is unlocked, but the handle is still closed the Status LED will flash **BLUE** / **MAGENTA**.
- When the dbDualLock (S)'s handle is in the open state the Status LED will turn solid **BLUE**.
- When the dbDualLock (S) is locked but the handle is still open and therefore unsecure the Status LED will flash **BLUE** / **RED**.
- When the dbDualLock (S) is locked, the handle is closed, but not fully engaged and therefore still unsecure the Status LED will flash **BLUE** / **RED** / **RED**.